



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,930	09/30/2003	Terry L. Schneider	7784-000553CPB	5157

65961 7590 01/23/2007
HARNESS DICKEY & PIERCE, PLC
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

CROUSE, BRETT ALAN

ART UNIT	PAPER NUMBER
----------	--------------

1774

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/674,930

Applicant(s)

SCHNEIDER, TERRY L.

Examiner

Brett A. Crouse

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

01 JUNE 2006

- 1) ☒ Responsive to communication(s) filed on 30 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Miscellaneous

In view of applicant's remarks and upon further consideration of the presently claimed invention, the rejections of record as presented in the previous office action mailed on 1 June 2006 have been withdrawn.

The following new rejections apply as follows:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 4, 10, 11, 16, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, and 35 contain the trademark/trade name NITINOL. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a nickel-titanium alloy and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1774

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-11, 13-32, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Ogata, US 6,099,969) hereinafter known as Ogata.

Ogata teaches in column 2, line 64 through column 3, line 6 a coating agent, having film forming properties, useful in enhancing various film properties, such as, UV screening, chemical resistance, weatherability, and sealing. Ogata further teaches in column 3, lines 57-60 that a resin binder can be part of a coating agent composition. Ogata further teaches in column 5, lines 5-13 materials useful as the agents of the composition including nickel and titanium alloys. The passage further teaches the particle size can range from 0.001 μ m to 20 μ m. Ogata further teaches in column 3, lines 36-38 that the concentration of the agent particles is typically 1.40 percent to 1.60 percent and can vary outside this range as needed. Ogata teaches in column 4, lines 28-30 that the coating will protect against acid rain and the like. Ogata further teaches in column 4, lines 19-25 that the coating can be applied using an organic pigment or dye. This is equated to applying the coating as a paint. Ogata does not teach that the nickel and titanium alloys are alloys comprising both nickel and titanium.

Art Unit: 1774

It would be obvious to one of ordinary skill in the art at the time of invention by applicant to use the teachings of Ogata to produce a coating/paint/outdoor coating because:

1. The properties enhanced by Ogata, such as, UV screening, chemical resistance, weatherability, resistance to acid such as acid rain and sealing are well known problems of outdoor paints and protective coatings.

2. The small particle size and low particle concentrations taught by Ogata as well as the transparency and pigments taught by Ogata suggest the ability to produce a uniform aesthetically pleasing coating or paint.

It would be obvious to one of ordinary skill in the art at the time of invention to produce nickel-titanium alloys as particles for the coatings based on Ogata's teaching of both nickel and titanium alloys as preferred materials.

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Terasaka, US 5,770,305) hereinafter known as Terasaka as evidenced by <http://herkules.oulu.fi/isbn9514252217/html/x317.html>, Fundamental characteristics of nickel-titanium shape memory alloy, Oulun Yliopisto.

Terasaka teaches in column 2, line 65 through column 3, line 9 with reference to figure 4, teach an anisotropic conductive film formed of an epoxy resin and contributing to adhesion. Conductive particles dispersed in the resin can be Titanium – Nickel alloy. Terasaka further teaches in column 3, lines 17-18, teach that the particles have a mean particle size of 8 μ m. Terasaka further teaches in column 2, line 65 through column 3,

Art Unit: 1774

line 9 with reference to figure 4, further teaches that the alloy expands or contracts in response to stress and the alloy particles can be crushed due to stress. The various shaped encompassed by the base particles and stress induced deformations is held to encompass spheres, ovals, and cylinders. The limitation granules, is held to be encompassed within the particle size distribution disclosure of a mean particle size of $8\mu\text{m}$.

Terasaka does not teach the resin composition in the form of paint. In the absence of a definition, the term paint is given little patentable weight and is equated with a coating. It would have been obvious to one of ordinary skill in the art at the time of invention to produce a resin including a pigment to make the coating aesthetically pleasing.

Terasaka further does not teach an austenitic or martensitic crystal structure of the alloy. It is noted that a nickel-titanium alloy is inherently either in an austenitic or martensitic crystal structure dependent on temperature and the relative percentages of the constituent metals, as evidenced by Fundamental characteristics of nickel-titanium shape memory alloy, and it is therefore obvious that it will exist in the film or phase as such. Terasaka further does recite a volume percent for amount of alloy within the resinous material. Column 3, lines 33-38 with reference to figure 5 teaches that the alloy content of the resin is 3 weight percent. The density of nickel-titanium alloy is about 6.5 g/cm^3 and the density of for example, phenolic resin is about 1.25 g/cm^3 . This results in a volume percentage of about 0.58 percent. This teaching is held to suggest about 1

Art Unit: 1774


volume percent as required by claims 6, 7, 19, 20, 28, and 29, which could be easily optimized by one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett A. Crouse whose telephone number is 571-272-6494. The examiner can normally be reached on Monday - Friday 6:00AM - 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAC 16 January 2007


RENA DYE
SUPERVISORY PATENT EXAMINER
A01774